



Topic B: Strengthening Biosecurity to Prevent Environmental and Public Health Crises



UNEP



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I. INTRODUCTION

Dear delegates of the United Nations Environment Programme (UNEP),

During this debate, you will discuss the current topic: **Strengthening Biosecurity to Prevent Environmental and Public Health Crises.**

Environmental degradation, increased human-wildlife interaction, and the rapid transformation of natural ecosystems have intensified the emergence and spread of infectious diseases. A significant proportion of global infectious diseases, including many potential pandemics, are zoonotic, originating in animals before affecting humans. Practices such as deforestation, illegal wildlife trade, land mismanagement, poor sanitation systems, and inadequate surveillance accelerate the likelihood of disease spillover. As threats continue to rise, establishing strong biosecurity systems has become indispensable to protect communities, safeguard ecosystems, and prevent future environmental and public health crises.

UNEP expresses deep concern regarding these growing threats and anticipates constructive and solution-driven debate. The objective of this committee is to explore effective strategies to strengthen biosecurity frameworks worldwide.

Welcome to the Olinca Model United Nations (OLINMUN) 2026.

Yours sincerely,

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Diego Andrés Rubio Valderrama

Head of Committee of UNEP

Chair of UNEP

Alejandra Sámano Suárez

Moderator of UNEP

María Madrid Pérez

Deputy Chair of UNEP

NOTE: We highly recommend you thoroughly read the following document and the Delegate Handbook. We expect they will provide an overview of the topics discussed and allow you to acquire crucial information about the rules of procedure.

II. OVERVIEW

A. COMMITTEE'S BACKGROUND

The United Nations Environment Programme (UNEP) is the highest authority regarding the environment in the world. Its mission is to inspire, inform, and lead nations and people to improve their quality of life without compromising that of future generations.

For over 50 years, UNEP has worked with governments, civil society, the private sector, and UN entities to help with humanity's greatest environmental challenges, such as restoring the ozone layer, protecting the world's seas, and promoting a green inclusive economy. It is also driving transformational change by facing the root causes of the planetary crisis of climate change. This committee is focused on helping countries change to low-carbon and resource-efficient economies, strengthening environmental governance and law, safeguarding ecosystems, and providing evidence-based data to inform policy decisions.

Its core mission is to find solutions to the planetary environmental crisis. As the highest authority regarding the environment in the world, the institution helps its Member States

to embrace climate stability, live in harmony with nature and create a pollution-free future, supporting the achievement of all 17 Sustainable Development Goals.

B. COMMITTEE'S ACHIEVEMENTS

Throughout the last years, UNEP has helped shape five decades of important environmental milestones. One of its major achievements has been the initiation, negotiation, and implementation of many multilateral environmental agreements, bringing together nations and addressing environmental challenges.

Thanks to UNEP support, many countries now have stronger environmental institutions, better instruments, greater knowledge, greener investments, and partnerships. This committee encourages discussions and enables the sharing of innovative ideas, technologies, and innovations. It has been appreciated for being an access free provider of tools such as integrated environmental assessments and for education and awareness-raising campaigns. It also provides 15 multilateral agreements which concern a range of environmental issues namely emissions, protection of biodiversity, endangered and migratory species, oceans, and ozone layer among others.

III. STRENGTHENING BIOSECURITY TO PREVENT ENVIRONMENTAL AND PUBLIC HEALTH CRISES

Biosecurity refers to the strategic systems, policies, and measures designed to prevent biological risks that can harm humans, animals, plants, and ecosystems. These risks include emerging infectious diseases, accidental release of dangerous biological agents,

genetically modified organisms, and the spread of Invasive Alien Species (IAS). Without strong biosecurity frameworks, entire regions can suffer irreparable environmental and public health consequences.

Today, biological threats spread more easily than ever due to globalization, climate change, habitat destruction, and insufficient surveillance. Weak regulations allow invasive species to devastate ecosystems, undermine agriculture, and introduce new pathogens. Poor waste management, wildlife consumption, and unsafe livestock practices increase the risk of disease spillover.

UNEP contributes to global biosecurity by supporting safe handling of biological materials, strengthening environmental monitoring, and advancing international agreements. Frameworks such as the Convention on Biological Diversity and the Cartagena Protocol on Biosafety establish guidelines for genetic resource protection, risk assessment, and laboratory safety.

The COVID-19 pandemic exposed how zoonotic diseases can overwhelm health systems, disrupt economies, and trigger worldwide crises. Regions with high biodiversity, particularly Southeast Asia, Central Africa, and parts of Latin America, face higher risk of spillover due to close human–wildlife interaction and rapid environmental change.

To prevent future biological threats, countries must reinforce surveillance systems, promote responsible land management, regulate wildlife trade, and improve coordination among environmental, health, agricultural, and trade authorities. Strengthening biosecurity requires proactive measures, not reactive ones, to protect food systems, ecosystems, and human health.

Ultimately, UNEP aims to support nations in developing resilient biosecurity systems that prevent biological hazards before they escalate into global emergencies.

IV. KEY POINTS FOR DEBATE

1. Outcomes of strengthened biosecurity
 - a. Evaluating biosecurity as a tool to prevent environmental and public health crises.
 - b. Improving ecosystem and health-system resilience to future risks.
2. Causes and contributing factors
 - a. Limited surveillance of wildlife, livestock, and ecosystems.
 - b. Climate change increasing pathogen spillover and disease transmission.
 - c. Waste mismanagement and unsafe environmental practices.
3. Law enforcement and regulation
 - a. Strengthening enforcement of national and international biosecurity laws.
 - b. Reducing illegal trafficking of high-risk wildlife species and biological materials.
4. Cultural and social contexts
 - a. Traditional wildlife consumption or livestock practices that heighten disease risks.
 - b. Social resistance to vaccines, disease control, and environmental regulation.
 - c. Importance of community education and awareness initiatives.
5. Corporate, organizational and governmental initiatives
 - a. Creation and improvement of national biosecurity protocols.
 - b. Identifying ongoing efforts from governments, NGOs, and industries.

- c. NGO initiatives promoting sustainable, low-risk environmental practices.
- 6. Environmental justice and inequality
 - a. Unequal access to healthcare and biosecurity protections.
 - b. Disproportionate exposure of marginalized communities to biological and environmental risks.
- 7. International collaboration
 - a. Establishing harmonized international biosecurity standards and guidelines.
 - b. Strengthening global monitoring, early warning systems, and data-sharing mechanisms.

IV. ANNEXES

A. LIST OF COUNTRIES

1. Bangladesh
2. Cambodia
3. China
4. Eritrea
5. Finland
6. France
7. Germany
8. India
9. Japan
10. Laos
11. Malaysia
12. Mexico
13. Moldova
14. Myanmar
15. Norway

16. Pakistan
17. Philippines
18. South Korea
19. Sweden
20. Taiwan
21. Thailand
22. Russian Federation
23. United Kingdom
24. United States of America

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